Smart Skies			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Fly by Math	NE	MA.5.MA 5.2.2.a	Plot the location of an ordered pair in the first quadrant
Fly by Math	NE	MA.5.MA 5.4.1.a	Represent data using line graphs
Fly by Math	NE	MA.5.MA 5.4.1.b	Represent the same set of data in different formats (e.g., table, pictographs, bar graphs, line graphs)
Fly by Math	NE	MA.5.MA 5.4.1.e	Generate questions and answers from data sets and their graphical representations
Line Up with Math	NE	MA.5.MA 5.2.5.b	Identify correct unit (customary or metric) to the measurement situation (e.g., distance from home to school; measure length of a room)
Line Up with Math	NE	MA.5.MA 5.2.5.c	Estimate and measure length with customary units to the nearest ¼ inch
Line Up with Math	NE	MA.5.MA 5.2.5.d	Measure capacity/volume with customary units
Line Up with Math	NE	MA.5.MA 5.2.5.e	Measure weight (mass) and temperature using metric units
Smart Skies			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Fly by Math	NE	MA.6.MA 6.2.2.a	Identify the ordered pair of a plotted point in the coordinate plane
Fly by Math	NE	MA.6.MA 6.2.3.a	Perform and describe positions and orientation of shapes under single transformations (translation, rotation, reflection) not on a coordinate plane
Fly by Math	NE	MA.6.MA 6.4.1.a	Represent data using stem and leaf plots, histograms, and frequency charts
Fly by Math	NE	MA.6.MA 6.4.1.b	Compare and interpret data sets and their graphical representations
Fly by Math	NE	MA.6.MA 6.4.2.a	Make predictions based on data and create questions to further investigate the quality of the predictions
Line Up with Math	NE	MA.6.MA 6.2.2.a	Identify the ordered pair of a plotted point in the coordinate plane
Line Up with Math	NE	MA.6.MA 6.2.5.a	Estimate and measure length with customary and metric units to the nearest 1/16 inch and mm
Line Up with Math	NE	MA.6.MA 6.2.5.b	Measure volume/capacity using the metric system
Smart Skies			

2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Fly by Math	NE	MA.7.MA 7.2.1.b	Name line, line segment, ray, and angle (e.g., "line" AB, "ray" PR "angle" LMN)
Fly by Math	NE	MA.7.MA 7.2.2.a	Plot the location of an ordered pair in the coordinate plane
Fly by Math	NE	MA.7.MA 7.2.2.b	Identify the quadrant of a given point in the coordinate plane
Fly by Math	NE	MA.7.MA 7.2.2.c	Find the distance between points along horizontal and vertical lines of a coordinate plane (e.g., what is the distance between (0, 3) and (0, 9))
Fly by Math	NE	MA.7.MA 7.2.3.b	Perform and describe positions and orientation of shapes under a single transformation (e.g., translation, rotation, reflection) on a coordinate plane
Fly by Math	NE	MA.7.MA 7.4.1.a	Analyze data sets and interpret their graphical representations
Fly by Math	NE	MA.7.MA 7.4.1.b	Find and interpret mean, median, mode, and range for sets of data
Fly by Math	NE	MA.7.MA 7.4.1.d	List biases that may be created by various data collection processes
Fly by Math	NE	MA.7.MA 7.4.2.a	Determine if data collected from a sample can be used to make predictions about a population
Line Up with Math	NE	MA.7.MA 7.2.1.b	Name line, line segment, ray, and angle (e.g., "line" AB, "ray" PR "angle" LMN)
Line Up with Math	NE	MA.7.MA 7.2.2.b	Identify the quadrant of a given point in the coordinate plane
Line Up with Math	NE	MA.7.MA 7.2.2.c	Find the distance between points along horizontal and vertical lines of a coordinate plane (e.g., what is the distance between (0, 3) and (0, 9))
Line Up with Math	NE	MA.7.MA 7.2.5.c	Recognize the inverse relationship between the size of a unit and the number of units used when measuring
Smart Skies			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Fly by Math	NE	MA.8.MA 8.4.1.a	Represent data using circle graphs and box plots with and without the use of technology
Fly by Math	NE	MA.8.MA 8.4.1.c	Find, interpret, and compare measures of central tendency (mean, median, mode) and the quartiles for sets of data

Fly by Math	NE	MA.8.MA 8.4.1.e	Identify misrepresentation and misinterpretation of data represented in circle graphs and box plots
Line Up with Math	NE	MA.8.MA 8.2.5.e	Convert between metric and standard units of measurement, given conversion factors (e.g., meters to yards)
Line Up with Math	NE	MA.8.MA 8.3.1.c	Identify constant slope from tables and graphs
Smart Skies			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grades 9-12			
Activity/Lesson	**State**	**Standards**	
Fly by Math	NE	MA.9-12.MA 12.4.1.a	Interpret data represented by the normal distribution and formulate conclusions
Fly by Math	NE	MA.9-12.MA 12.4.1.b	Compute, identify, and interpret measures of central tendency (mean, median, mode) when provided a graph or data set
Fly by Math	NE	MA.9-12.MA 12.4.1.c	Explain how sample size and transformations of data affect measures of central tendency
Fly by Math	NE	MA.9-12.MA 12.4.1.f	Create scatter plots, analyze patterns, and describe relationships in paired data
Fly by Math	NE	MA.9-12.MA 12.4.1.g	Explain the impact of sampling methods, bias, and the phrasing of questions asked during data collection and the conclusions that can rightfully be made
Line Up with Math	NE	MA.9-12.MA 12.1.2.b	Use drawings, words, and symbols to explain that the distance between two numbers on the number line is the absolute value of their difference
Line Up with Math	NE	MA.9-12.MA 12.2.2.c	Apply the distance formula
Line Up with Math	NE	MA.9-12.MA 12.2.5.a	Use strategies to find surface area and volume of complex objects
Line Up with Math	NE	MA.9-12.MA 12.2.5.b	Apply appropriate units and scales to solve problems involving measurement
Line Up with Math	NE	MA.9-12.MA 12.2.5.c	Convert between various units of area and volume, such as square feet to square yards
Line Up with Math	NE	MA.9-12.MA 12.2.5.d	Convert equivalent rates (e.g., feet/second to miles/hour)
Line Up with Math	NE	MA.9-12.MA 12.2.5.e	Find arc length and area of sectors of a circle
Line Up with Math	NE	MA.9-12.MA 12.2.5.f	Determine surface area and volume of three-dimensional objects (e.g., spheres, cones, pyramids)
Line Up with Math	NE	MA.9-12.MA 12.2.5.g	Know that the effect of a scale factor k on length, area and volume is to multiply each by k, k^2 and k^3, respectively

Line Up with Math	NE	MA.9-12.MA 12.3.1.a	Represent, interpret, and analyze functions with graphs, tables, and algebraic notation and convert among these representations (e.g., linear, non-linear)
Line Up with Math	NE	MA.9-12.MA 12.3.1.f	Compare and analyze the rate of change by using ordered pairs, tables, graphs, and equations
Line Up with Math	NE	MA.9-12.MA 12.3.1.h	Represent, interpret, and analyze functions and their inverses